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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,424	03/01/2002	Rainer Jormanainen	915-004.008	6238
4955 7590 02/28/2007 WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP BRADFORD GREEN, BUILDING 5 755 MAIN STREET, P O BOX 224 MONROE, CT 06468			EXAMINER DUONG, FRANK	
			ART UNIT 2616	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/28/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/090,424

Applicant(s)

JORMANAINEN ET AL.

Examiner

Frank Duong

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This Office Action is a response to communications dated 12/14/06. Claims 1-28 are pending in the application.

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "telecommunication network including a plurality of access systems employing different access technologies", newly added in the independent claims 1 and 14, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support for the newly added limitation of "telecommunication network including a plurality of access systems employing different access technologies" in the original specification. In accordance to Fig. 1 and its accompanied description on page 9, lines 9-12, it is disclosed that Fig. 1 depicts "*the generic ATM switch comprises an ATM switching unit 1 which is arranged to switch connections between one or a plurality of base stations (BS) and the UMTS network.*" This description refers rather to a well-known third generation cellular telecommunication network. From the disclosure the claimed limitation of telecommunication network including a plurality of access systems employing different access technologies" cannot unambiguously derive to reasonably convey to one skilled

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in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

*(Note: There is no art applied in determining the allowability of the newly added limitation due the problem discussed above. Should the Applicants, in a response to this Office Action, remove the disputed limitation, the below rejection is applied)*

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-11, 13-18, 21-26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by McTiffin (EP 0,679,042).

Regarding **claim 1**, in accordance with McTiffin reference entirety, McTiffin discloses method for performing switching between an incoming side and an outgoing side of a switching network element (*Fig. 4*) in a telecommunication network (*Fig. 3*), said method comprising the steps of:

a) allocating technology-independent identifications (*unique VCI and VPI*) to a call resource of said switching network element (*MNIU*), request by a received call (*col. 3, lines 22-24 and thereafter*);

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b) defining an incoming logical leg ( $VPI_A/VCIX$  or  $VPI_B/VCIX$ ) and an outgoing logical leg ( $VPI_P/VCIQ$ ) for said received call by using said allocated identifications for said incoming side and said outgoing side, respectively (*col. 3, lines 30-37 or col. 4, lines 26-58 and thereafter*), and

c) controlling said switching network element for said received call based on said incoming logical leg and said outgoing logical leg (*col. 4, lines 31-34, the functions of circuit 22 is discussed*).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses wherein said call resources **comprise at least one of** a transcoding service, a **macro diversity combining service**, an AAL2 switching service, a tone generating service, an echo canceling service, a compression service and a conference call service (*col. 4, line 49 and thereafter*).

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses defining a plurality of incoming logical legs ( $VPI_A/VCIX$  and  $VPI_B/VCIX$ ) for a through connection to an outgoing logical leg ( $VPI_P/VCIQ$ ) (*see Fig. 4*).

Regarding **claim 4**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses providing for at least one of said incoming logical leg and/or said outgoing logical leg comprise a plurality of subconnections needed for a whole through-connection between said incoming side and said outgoing side (*see Fig. 4 for connection details of incoming and outgoing logical connections*).

Regarding **claim 5**, in addition to features recited in base claim 4 (see rationales discussed above), McTiffin further discloses wherein said plurality of subconnections depend on services requested by said received call (*col. 3, lines 22-24 and thereafter*).

Regarding **claim 6**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses controlling a reservation of service resources and a cross-connection handling between service points base on said incoming and outgoing logical legs (*subnetwork interfaces for enabling macrodiversity are discussed at col. 5, lines 12-24 and thereafter*).

Regarding **claim 7**, in addition to features recited in base claim 6 (see rationales discussed above), McTiffin further discloses reserving resources with the same traffic parameters as reserved for a previous service in a service chain of a logical leg (see *Fig. 6 and its corresponding description at col. 6, line 42 to col. 7, line 46*).

Regarding **claim 8**, in addition to features recited in base claim 4 (see rationales discussed above), McTiffin further discloses wherein said plurality of subconnections comprise an AAL2 connection **and/or** an ATM connection (*Fig. 4 or 6 depicted ATM connection (VPI/VCI)*).

Regarding **claim 9**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses managing a signal processing resource for providing service functions based on said incoming and outgoing logical legs (*Fig. 4; ATM switch 14 or 15*).

Regarding **claim 10**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses storing data of said incoming and outgoing logical legs in a memory (*Fig. 4; buffers 18 and 20*).

Regarding **claim 11**, in addition to features recited in base claim 10 (see rationales discussed above), McTiffin further discloses permanently storing a leg identification information and creating a leg in a start-up phase according to the defined services (*col. 3, lines 38-46*).

Regarding **claim 13**, in addition to features recited in base claim 10 (see rationales discussed above), McTiffin further discloses refreshing said incoming and outgoing logical legs based on a refresh request (*col. 7, lines 18-30*).

Regarding **claim 14**, in accordance with McTiffin reference entirety, McTiffin shows switching network element (*Fig. 4*) configured to perform switching between an incoming side (*Fig. 4; From Access Network*) thereof and an outgoing side (*Fig. 4; To Fixed Network*) thereof in a telecommunication network (*Fig. 3*), said switching network element (*Fig. 4*) comprising:

logical resource interface (*MNIU*) configured to allocate an access technology-independent identification (*unique VCI and VPI*) to a call resource requested by a received call (*col. 3, lines 22-24 and thereafter*); and

a leg control (*ATM switch 14 and 16*) configured to control a switching operation of said switching network element based on an incoming logical leg (*VPI<sub>A</sub>/VCIX* or *VPI<sub>B</sub>/VCIX*) and an outgoing logical leg (*VPI<sub>P</sub>/VCIQ*) defined by the identifications allocated by said logical resource interface to requested cell resources at said incoming



side and said outgoing side, respectively (*col. 3, lines 30-37 or col. 4, lines 26-58 and thereafter*).

Regarding **claim 15**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further shows a memory (*Fig. 4; buffer pair 18 and 20*) configured to store data of said incoming and outgoing logical legs (*col. 4, lines 29-31*).

Regarding **claim 16**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses wherein said leg control is configured to mark and store a registration information of a leg to a client who created the leg (*col. 3, lines 10-13*).

Regarding **claim 17**, in addition to features recited in base claim 16 (see rationales discussed above), McTiffin further discloses wherein said leg control is configured to perform control such that only the registered owner of a leg is allowed to request operations concerning this particular leg (*col. 3, lines 10-13*).

Regarding **claim 18**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses a connection control configured to control a switching means in response to an output of said leg control (*not shown; inherently there is some sort of controlling mechanism or connection control (CAC) in an ATM switch (14 and 16)*).

Regarding **claim 21**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses further comprising a signal

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processing control configured to control an allocation of signal processing resources to service functions based on an output of said leg control (*Fig. 4; ATM switch 14 or 15*).

Regarding **claim 22**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses wherein said service functions comprise **at least one of** transcoding, tone generation, echo canceling, compression, announcements, conference call services and ***macro diversity combining services*** (*col. 4, line 49 and thereafter*).

Regarding **claim 23**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses wherein said leg control is configured to determine necessary subconnection end points based on services required for said incoming and outgoing side according to said received call (*subnetwork interfaces for enabling macrodiversity are discussed at col. 5, lines 12-24 and thereafter*).

Regarding **claim 24**, in addition to features recited in base claim 19 (see rationales discussed above), McTiffin further discloses wherein said ATM connection leg control is configured to supply subconnection end points to said leg control based on requested services required for said incoming and outgoing side according to said received call (*subnetwork interfaces for enabling macrodiversity are discussed at col. 5, lines 12-24 and thereafter*).

Regarding **claim 25**, in addition to features recited in base claim 21 (see rationales discussed above), McTiffin further discloses wherein said leg control is configured to use said signal processing resource control in order to request service

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end points for transcoding **or macro diversity services** needed for said received call (*subnetwork interfaces for enabling macrodiversity are discussed at col. 5, lines 12-24 and thereafter*).

Regarding **claim 26**, in addition to features recited in base claim 21 (see rationales discussed above), McTiffin further discloses wherein said processing control is configured to reserve resources with same traffic parameters as were received for a previous service in a service chain of a logical leg (*see Fig. 6 and its corresponding description at col. 6, line 42 to col. 7, line 46*).

Regarding **claim 28**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses wherein said switching element is a radio network controller or an interworking network element of a third generation mobile network (*Fig. 4*).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12, 19-20 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over McTiffin in view of Boldt et al (Modeling an ATM-Based Access Network for 3<sup>rd</sup> Generation Mobile Communication Networks, IEEE, pages 2590-2593, 1998) (hereinafter "Boldt").

In addition to features recited in base claims 1 and 14, McTiffin fails to further disclose the applying of AAL2 service or AAL2 connection control. However, such limitation lacks thereof from McTiffin's teaching is well known and disclosed by Boldt.

In an analogous art, Boldt teaches an ATM switch extended to AAL2 switching (Figure 5 or 8), comprising, among other things, the limitation of applying of AAL2 service or AAL2 connection control (*page 2593, left column, address mapping between AAL2 channel identifier and ATM VCI/VPIs*) to achieve higher efficiency as well as coping with delay sensitive services (*Boldt, page 2590, right column, second paragraph*).

Thus, it would have been obvious to those skilled in the art at the time of the invention to implement Boldt's teaching into McTiffin's method and system to arrive the claimed invention with a motivation to achieve higher efficiency as well as coping with delay sensitive services (*Boldt, page 2590, right column, second paragraph*).

### ***Response to Arguments***

6. Applicant's arguments filed 12/14/06 have been fully considered but they are not persuasive.

In the Remarks of the outstanding response, on pages 7-8, Applicants disagree with the Examiner's interpretation of the McTiffin reference in the rejection of claims 1-11, 13-18, 21-26 and 28. Applicants allege the term "technology-independent identifications" "*needs to be understood in the context of the present specification and the problem that it addresses*". To support the allegation Applicants amend the

independent claims 1 and 14 to make it clear that *"the method of claim 1 and the switching network element of claim 14 are for a switching methodology and a switching network element in a telecommunication network that includes a plurality of access systems employing different access technologies and that the allocation of identifications is an allocation of "access" technology-independent identifications."*

In response Examiner respectfully disagrees and would like to state the disclosed invention is a generic ATM switch as depicted in Fig. 1 and so described. The gist of the Applicants' disclosed invention is the incorporation of the AAL2 service unit 9 in the generic ATM switch of Fig. 1. However, the disclosed generic ATM switch having AAL2 capability is not novel as clearly pointed out in the Office Action. As for the disputed term of "technology-independent identifications", Examiner asserts the Office Action does indeed properly interpret such term in the McTiffin reference for there is neither specific definition for it in the claims nor in the original specification. Pertaining the newly added limitation of "telecommunication network including a plurality of access systems employing different access technologies", it encounters problem as discussed above. Should the Applicants are able to clearly point out where in the original specification the limitation is disclose, in a response to this Office Action, Examiner would promptly place this instant application in the condition for allowance.

Examiner believes an earnest attempt has been made in addressing all of the Applicants' arguments. Due to the response fails to place the instant application in a favorable condition for allowance, the rejection is maintained.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**FRANK DUONG**  
**PRIMARY EXAMINER**

February 22, 2007